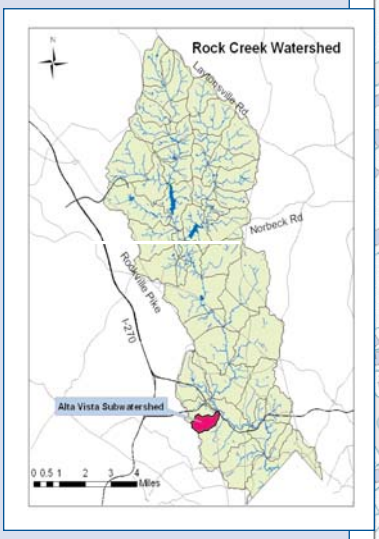
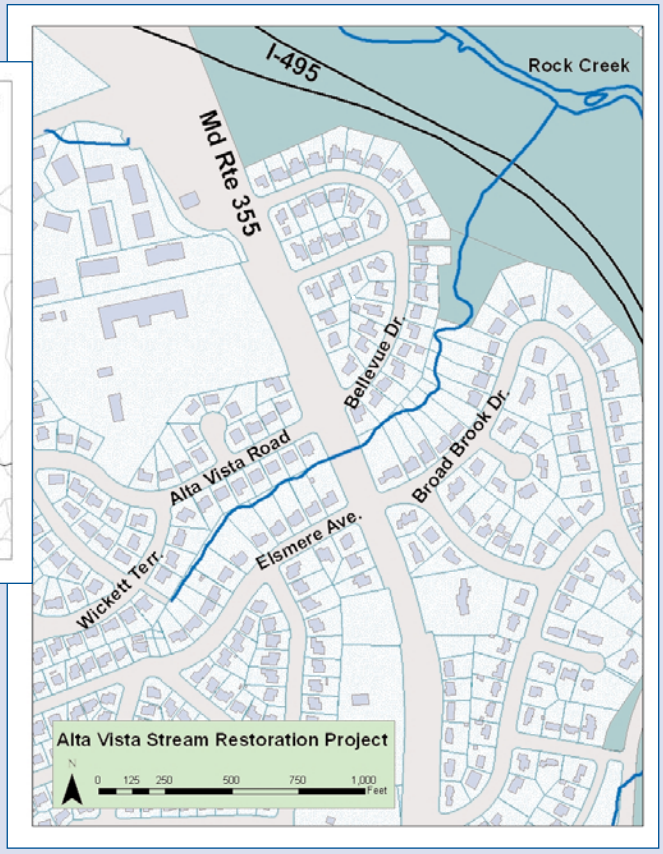
Watershed Restoration FACTSHEET:

Alta Vista Tributary Project



The Rock Creek Watershed, a tributary of the Potomac River, includes a drainage area of 60 square miles. Rock Creek flows 21 miles through central Montgomery County, east of I-270, then continues into the District of Columbia.



Alta Vista Tributary Subwatershed Facts:
Subwatershed Drainage Area: 700 acres,
Subwatershed Imperviousness: 30%
Property Ownership: Private and Maryland-National Capital Park and Planning Commission

Restoration Goals:
To stabilize eroding stream banks, re-establish a riparian buffer, protect exposed sewer lines and manholes, improve fish passage, and improve aquatic habitat conditions,

Stream Restoration Project Facts:
Project Length: 2,700 feet
Estimated Costs: Construction ($360,000); Reforestation ($8,000)
Funded in part through a grant from the Maryland Department of the Environment.

Estimated Project Start Date: Fall 2005

Stream Monitoring Facts:
Pre- and Post Restoration Monitoring, following DEP Monitoring Protocols, will continue for five years post-construction.

For technical and professional specifications (coming soon), visit askdep.com

Project Selection

Montgomery County has a continuing commitment to protect and improve its water resources. *The Countywide Stream Protection Strategy, (*CSPS,1998, updated 2003*),* published by the Department of Environmental Protection (DEP), evaluated biological, chemical, and habitat conditions of streams in the county, and identified impaired "priority" subwatersheds for restoration, including the Alta Vista Tributary subwatershed.

Following the *CSPS*, *The Rock Creek Watershed Feasibility Study (April 2001)* evaluated more than 14 miles of Rock Creek and its tributaries to identify specific stream restoration and stormwater management opportunities. The study identified 23 priority stream restoration sites, including the Alta Vista tributary of Rock Creek.

The Rock Creek Watershed Restoration Action Plan summarizes the results of the Feasibility Study, and is available on the DEP website, **askdep.com** or by contacting DEP at 240.777.7712.

Pre-Restoration Conditions

Much of the lower Rock Creek Watershed, including the Alta Vista subwatershed, was developed prior to regulations requiring stormwater management control and contains a high percentage of impervious surface. Uncontrolled stormwater runoff from highly impervious areas creates erosive, high velocity or "flashy" stormwater flows that cause damage to receiving streams.

The Rock Creek Watershed Feasibility Study identified several impaired conditions in the Alta Vista Tributary. Uncontrolled stormwater created severe stream bank erosion and unstable banks, undercut trees, and damaged private property. Undercut trees fell into the stream and created debris jams that blocked the stream and caused further bank erosion.

Over time, the stream channel was down-cut and became overwidened, which limited stream flow access to the original floodplain, exposed sewer lines and sewer manholes to potential damage, and further destroyed the habitat necessary for diverse aquatic life. Sediment from eroded banks and road grit accumulated in the stream, leading to the ongoing degradation of stream habitat conditions.

Proposed Restoration Actions

The Alta Vista Tributary Project will use construction restoration techniques and reforestation to help stabilize stream banks and enhance riparian habitat.

Imbricated rip rap rock will be installed along eroding stream bank slopes, protecting the stream channel from further damage. The slopes above the rip rap walls will be planted with native trees and shrubs to further stabilize the stream banks.

Heavy stormwater flows have eroded banks, exposed sanitary sewer untilities, dmaged private property and undercut trees.

The Alta Vista Tributary is characterized by steep banks very close to vulnerable residential properties.

Imbricated rip rap stabilizes the stream bank slope. Native riparian trees and shrubs planted above the rock provide long-term stream bank stability.

Rock Cross vanes function to keep the stream flow in the center of the channel, and also act as grade control, slowing the erosive process of downcutiing.

Proposed in-stream structures include rock and log vanes, which direct water away from unstable stream banks, and form down stream scour pools, providing good habitat for fish. Rock cross vanes also function as grade control, which slow the erosive process of stream down-cutting.

Undercut trees will be reinforced with supportive rock packing. More seriously damaged trees will be cut flush with the stream bank, allowing the root systems to remain in the bank for stabilization.

Exposed sanitary sewer lines will be reburied, and exposed manholes will be protected with rock. All utility work will be completed in coordination with the WSSC. Damaged and eroded storm drain outfalls will also be repaired.

Alta Vista is a highly urban stream, mostly privately owned, whose storm flows are causing damage to private property and utilities. Completion of the project will require a high level of cooperation between the County and the property owners.

follow web link for more information see online glossary **www.askdep.com/watershed_glossary.htm**

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For more information:

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